

JUL 30 10 03 AM '98

INITIAL RESPONSE ACTION PLAN SUMMARY REPORT
for
BEECH STREET SCHOOL
BENNINGTON, VERMONT

Prepared by:
Aaron & Sons
334 Pleasant Street
Bennington, Vermont

June/July 1998

EXECUTIVE SUMMARY

Free petroleum product was found exiting a pipe at the subject property in proximity to a stream tributary. Emergency response procedures were enacted at the site to attenuate the flow of product to surface water. The product flow was assumed to be associated with that of a building foundation drain located adjacent to a leaking underground fuel oil storage tank, which was subsequently removed.

With the approval and guidance of the Sites Management Section, Waste Management Division, Department of Environmental Conservation, Vermont Agency of Natural Resources, initial response action to remove contaminated soils and material associated with the foundation drain was initiated, and a carbon filtration treatment device was installed at the continuing discharge of the foundation drain, preceded by an oil/water separator pond. During the course of the removal effort, some 120 cubic yards of contaminated soil and materials was removed, and transported from the site for thermal destruction.

Visual evidence, field screening, and confirmatory laboratory analysis at the completion of excavation efforts indicated that all contaminated soil has been removed. Further observations indicated that the vertical and lateral contaminant migration was limited to the area immediately surrounding the ust and the material immediately surrounding the perforated portion of the foundation drain line. The foundation drain and sanitary sewer lines which were required to be disconnected during the removal efforts have been reconstructed with clean materials, and the excavations backfilled. The oil/water separator and the carbon treatment have been discontinued, and site construction activities have ceased.

Based on the findings of this initial response action, no further investigation or remedial actions are recommended for the subject property at this time, save for intermittent analyses of the reconstructed foundation drain discharge.

INTRODUCTION & BACKGROUND

21 APR to 1 MAY 98

Following discovery of free petroleum product found exiting a pipe at the southwesterly corner of the Beech Street School property, flowing generally to a small tributary of South Stream, emergency procedures were enacted, performed as discussed and approved by Marc Coleman, Hazardous Materials Specialist with the UST Program. These emergency procedures included removal and stockpile of contaminated soils found near the water course, and implementation of a temporary oil/water separator, or spillage pond, at the outlet of the pipe.

Investigations determined that the pipe was a building foundation drain, and the source of the petroleum product was found to be a leaking 2000 gallon heating oil underground storage tank, which was located at the building in proximity to the perforated foundation drain.

A new heating oil tank was installed in the basement of the school building, and the remaining product within the ust was transferred to this new tank. The ust was then removed, and transported by Aaron & Sons personnel for cleaning and disposal. The tank was found to be in poor condition, and the readings taken by PID at the ust grave registered a maximum of 187 ppm. The foundation drain in proximity to the tank was exposed, and found to be black perforated plastic pipe, in a stone trench. The soils onsite consist mostly of clay, with sandy silt overburden, minimal topsoil in grassed areas, and compacted gravel beneath pavement surrounding the ust excavation. Depth to groundwater was found approximately five feet below grade at the building area of the site. Some impacted soil was removed in conjunction with the tank closure and stockpiled onsite.

A portion of the onsite septic system, evident from concrete tank covers, was briefly investigated for evidence of contamination. A septic tank is onsite, as is a purportedly discontinued drywell, in proximate location of a portion of the foundation drain line. It is believed that the flow from the septic tank was redirected to a disposal field and that the drywell is no longer in use. The septic tank and drywell were uncovered and pumped. A sheen was noted on the liquid surface of the drywell.

Test pits were performed starting at the pipe discharge and working back up the foundation drain line, indicating no presence of contamination, and solid pvc pipe from the discharge to within approximately twenty feet of the building. Along the face of the building and some twenty feet from the corner, the perforated pipe in stone trench was evident, and contamination was found to mainly be contained within the stone itself, with the tight surrounding soils only marginally impacted.

The foundation drain was run partially along the building and southerly to approximately the edge of the asphalt parking area below the sanitary sewer line. It was necessary to break the sewer line and empty it into a temporary holding tank to perform the initial investigations, and to access the foundation drain beneath. The holding tank was pumped periodically during the course of the investigation.

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A portion of the onsite septic system, evident from concrete tank covers, was briefly investigated for evidence of contamination. A septic tank is onsite, as is a purportedly discontinued drywell, in proximate location of a portion of the foundation drain line. It is believed that the flow from the septic tank was redirected to a disposal field and that the drywell is no longer in use. The septic tank and drywell were uncovered and pumped. A sheen was noted on the liquid surface of the drywell.

Test pits were performed starting at the pipe discharge and working back up the foundation drain line, indicating no presence of contamination, and solid pvc pipe from the discharge to within approximately twenty feet of the building. Along the face of the building and some twenty feet from the corner, the perforated pipe in stone trench was evident, and contamination was found to mainly be contained within the stone itself, with the tight surrounding soils only marginally impacted.

The foundation drain was run partially along the building and southerly to approximately the edge of the asphalt parking area below the sanitary sewer line. It was necessary to break the sewer line and empty it into a temporary holding tank to perform the initial investigations, and to access the foundation drain beneath. The holding tank was pumped periodically during the course of the investigation.

To May 1, 1998, 35 cubic yards of impacted soils were segregated and contained in lined dumpsters onsite. Samples of the stockpiled soils were collected and analyzed for total petroleum hydrocarbons preparatory for disposal. The results are attached to this report, indicating presence of #2 fuel oil only.

Following referral of the project from the UST Program to John Schmeltzer at the Sites Management Section, construction activities were suspended to allow adequate characterization of the site and consensus of further action. An Initial Response Action Plan was submitted to the Sites Management Section on May 7, 1998, outlining interim work objectives and activities to: eliminate contaminant discharge to the stream tributary; remove free product from the foundation drain, thus eliminating the potential for future discharges to the environment; remove oil-contaminated soil from the ground to eliminate a potential continuing source of contaminants to the groundwater.

INITIAL RESPONSE ACTION PLAN ACTIVITIES

4 to 13 MAY 98

Approval was granted from the Sites Management Section, and the Wastewater Management Division for a temporary treated discharge of the foundation drain through an activated carbon canister treatment system prior to overflow to the stream tributary. This treatment installation necessitated the relocation of the original oil/water separator, or spillage pond uphill, due to property line constraints and elevation differentials. During the entire course of the investigation, absorbant pads were utilized at the spillage pond, replaced as necessary.

The ultimate discharge was sampled and analyzed for aromatic volatile organics by EPA method 8021, and for petroleum hydrocarbons by EPA method 8100 modified, to assure the effectiveness of the treatment device. The results are attached to this report, and indicate successful treatment.

The backflow from the foundation drain was being contained within the ust excavation. Portions of the excavation were lined with plastic, and a sump pump was installed within the bottom of the excavation, with the discharge initially running to a plastic barrel filled with an oil containment boom. The discharge from this barrel was allowed to flow over oil absorption pads, thence across the parking area for this initial work. At the onset of contaminant removal excavations, the discharge was directed to the oil/water separator pond. Absorbant pads were utilized at the sump pump pond during the course of the investigation, replaced as necessary.

14-15 MAY 98

The foundation drain trench was dug down to the top of the stone elevation. The excavation efforts were severely hampered by site constraints and equipment maneuverability, and the heaviness of the surrounding clay material. The material on top of the stone was monitored via PID, with no measurable readings, and the excavated material was segregated and stockpiled onsite.

19 MAY 98

At the suggestion of Mr. Schmeltzer, test pits surrounding the ust excavation were performed to better estimate the limits of contamination in this area, and the volume of potentially excavated material. The locations and depths of these test pits are illustrated on the attached sketch. No measurable readings were noted within five horizontal feet of the then existing excavation.

19-20 MAY 98

During the course of the test pit investigation, an unknown water main was hit, severing the school's water service line. Though both Dig Safe and the Town of Bennington Public Works Department had been alerted as to the excavations intended, neither were aware of the presence of this eight inch diameter water main, which apparently dead-ends behind the school, serving only the school with a one-inch copper service in an unanticipated location. This event resulted in a flooding of the excavations, the spillage pond, and the carbon filter, and a muddy discharge to the stream and tributary. The municipal water department shut the water off at the road to the facility, the water service line was reconstructed, the excavations were dewatered, and the sump-pump pond within the ust excavation was recreated. The carbon filter needed to be changed-out, and hay bales were placed at the stream and tributary to attenuate the siltation.

20-21 MAY 98

Foundation drain, stone, and residual contaminant removal within the foundation drain trench up to the ust excavation were completed during this time. As expected, the tightness of the soils allowed for most of the contamination to be contained within the drain line stone with minimal impact to the underlying soils. This work, however, was hampered by the need to maintain the groundwater flow back to the ust excavation sump pump pond, so as not to recontaminate the lower portions of the trench removal already accomplished. This difficulty, coupled with the site constraints, equipment maneuverability, and heaviness of the wet soils, required more time be devoted to this effort than anticipated.

Excavated soils and material were segregated and contained in onsite lined dumpsters, with some 40 cubic yards removed during this portion of the excavations. Monitoring was performed within the trench following the obvious impacted material removal. Grab samples were taken in plastic baggies from both sidewalls and the bottom of the trench, at five foot intervals along the entire length. The highest reading measured from the samples via PID was 3.3 ppm, with most not measurable.

22 MAY 98

The foundation drain from the ust excavation to the point of connection of perforated to solid pipe was reconstructed of perforated sdr-35 pvc, set in stone. Prior to reconnection to the solid pipe, which still discharged at this point to the oil/water separator or spillage pond, the solid pipe was jetted and cleaned, in an effort to remove any residual contamination within the pipe. Overburden to the new foundation drain and stone trench was provided from the clean segregated

materials stockpiled onsite, and compacted in one foot lifts. The sanitary sewer line was then reconstructed from the building to the point of disconnection, and the temporary holding tank was removed from the ust excavation. A dam was formed within the ust excavation to prevent potentially contaminated flow from this area to enter the new foundation drain line, and the initial point of the new line was plugged and encased in plastic.

26-27 MAY 98

Impacted soil removal within the ust excavation was completed during this time. The foundation drain farther toward this end of the building was uncovered and removed to the point of no measurable readings. During the removal of the impacted soils, sidewalls and bottoms of the excavation, the sump pump pit, lined with plastic, was continually redug and relocated to assist in the dewatering and to attempt to avoid recontamination of the cleaned areas. Soils were monitored by the bucket load as they were removed, and contaminated soils were segregated and placed in the onsite lined dumpsters. In all, some 45 cubic yards additional impacted soils were removed and stockpiled from this area.

Following removal, two samples were taken of the remaining soils at the limits of the excavation. One composite sample of the sidewalls, confirming horizontal limits, and one composite sample of the bottom, confirming vertical limits, were analyzed for TPH and VOC's, the results of which are attached to this report, indicating successful removal limits of impacted soils.

28 MAY 98

The bottom of the ust excavation was refilled with dead sand to alleviate settling due to backfill within a watery excavation. The remainder of the excavation was backfilled with clean excavated material, and gravel brought in to grade, compacted in lifts. The remainder of the foundation drain removed was reconstructed and reconnected to the new foundation drain at the other side of the ust excavation.

COMPLETION

The impacted stockpiled soils, totaling some 120 cubic yards and 180 tons, was transported by and to Maxymillian Technologies for thermal destruction, following approval by John Schmeltzer of the Sites Management Section. Attached to this report is the bill of lading for this transport and disposal activity.

Following removal of impacted soils within the ust excavation which would have the potential for inclusion within the foundation drain flow pattern, the removal of impacted materials within the old foundation drain trench, and the reconstruction of the foundation drain itself utilizing clean materials, the discharge of the foundation drain, prior to the spillage pond and the carbon treatment, was sampled and analyzed via EPA Methods 8100M and 8021 on June 8, 1998. The results are attached, indicating no detectable constituents. At the request of Mr. Schmeltzer, this sampling and analysis was performed again on June 24, 1998, following a period of heavy rain, to assure similar results. The second analytical results are also attached, again indicating no

detectable constituents. Approval was granted from the Sites Management Section and the Wastewater Management Division for discontinuance of the treatment device and spillage pond, and reconstruction of the solid foundation drain to the roadside swale.

CONCLUSIONS AND RECOMMENDATIONS

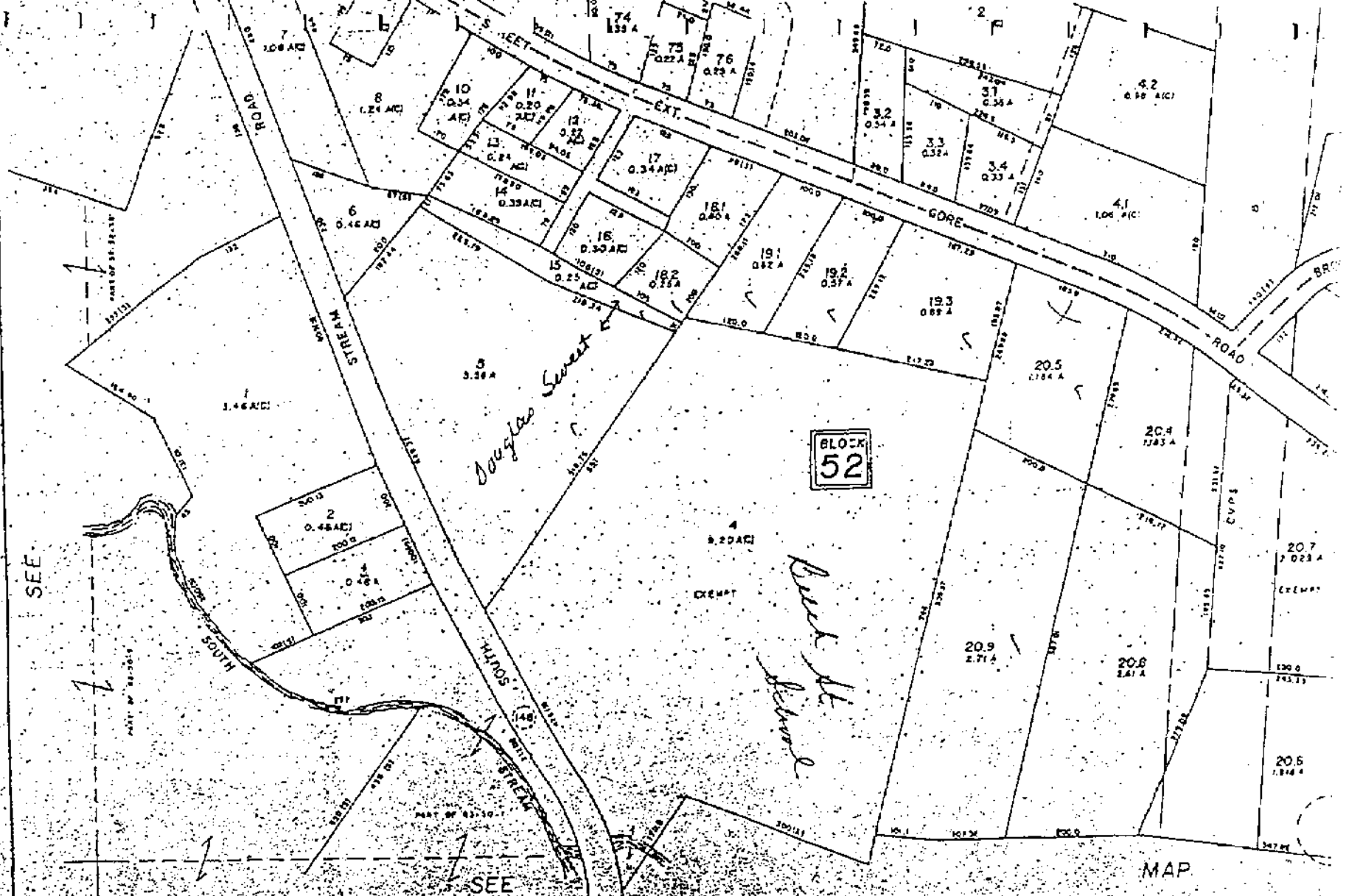
During the course of the initial response, the limits of contamination were identified, and to the extent visually and physically observed, the impacted soils were removed. Laboratory analysis of samples collected from the side walls and bottom of the ust excavation confirm that all contaminant source material has been removed.

The discharge of the foundation drain, which was the path of product from the leaking underground storage tank, has similarly tested clear of contaminants following reconstruction.

Based on these findings, no contaminant sources associated with the former ust and foundation drain line remain at the site, eliminating potential continuing releases and threat.

Though excavation work and contaminated material was performed and discovered below groundwater level, the groundwater from the ust site appeared to flow and be captured by the building foundation drain, and the groundwater captured within the drain, due to the low permeability of the underlying soils, remained within the drain trench material, flowing with the stone and piping. These site limitations suggest that contaminant migration in the unsaturated zone has been minimal, and that groundwater outside the foundation drain and ust excavations has not been impacted.

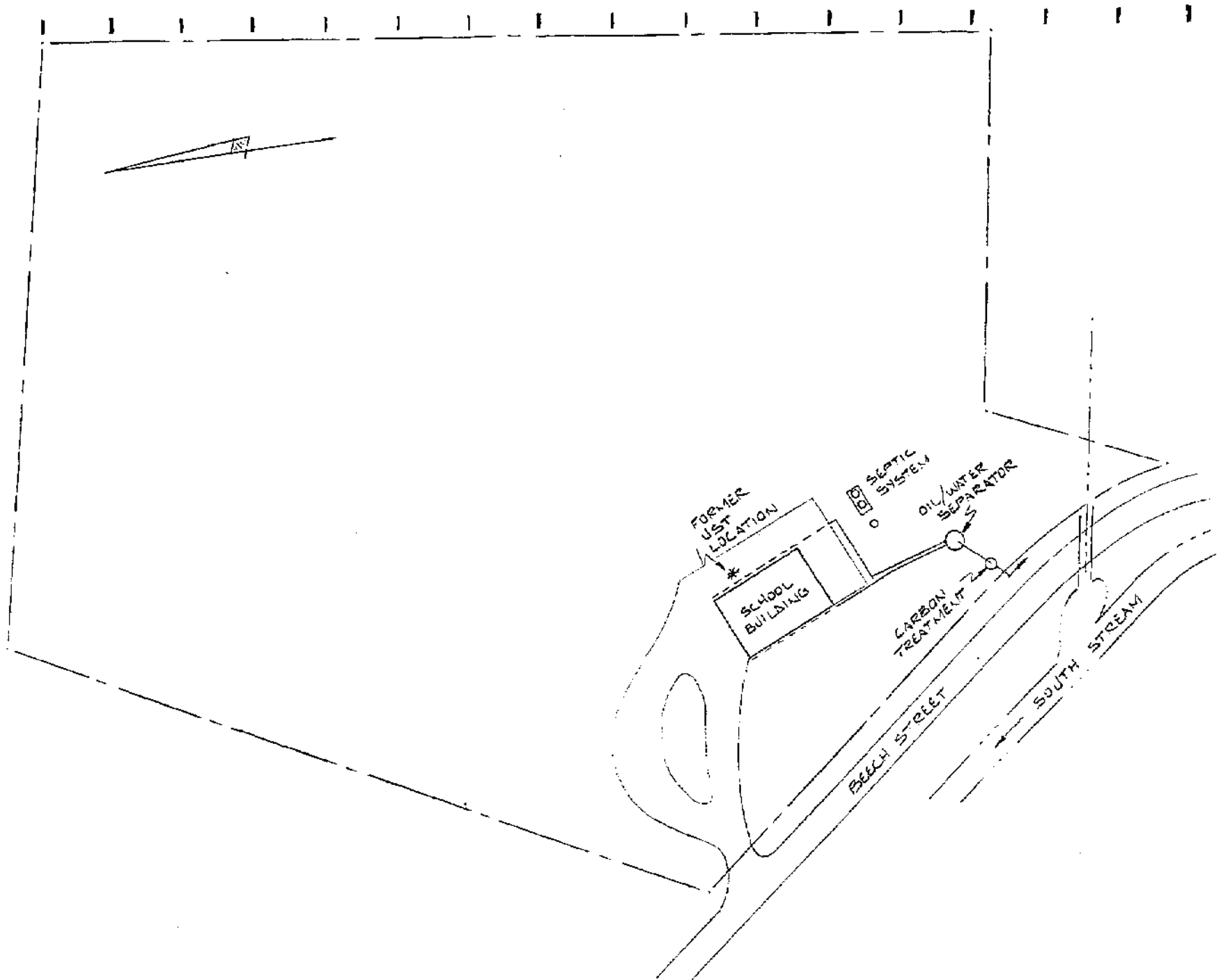
Based on the findings of this initial response action, no further investigations or remedial actions are recommended for the subject property at this time. It is perhaps warranted, however, as suggested by Mr. Schmeltzer, that the reconstructed foundation drain discharge be sampled and analyzed via EPA Methods 8100M and 8021, some one month following this summary report completion, during the month of August, 1998, then again in six months time, being about February, 1999, then again in one year, being August, 1999, to assure successful limitation of potential migration following contaminant removal.



REVISIONS				LEGEND			
No.	By	Description	Date	No.	By	Description	Date
1	1	Revised from 12-12-12	12-12-12	1	1	Property Line	12-12-12
2	2	Revised from 12-12-12	12-12-12	2	2	County Line	12-12-12
3	3	Revised from 12-12-12	12-12-12	3	3	Water	12-12-12
4	4	Revised from 12-12-12	12-12-12	4	4	Road	12-12-12
5	5	Revised from 12-12-12	12-12-12	5	5	Other	12-12-12
6	6	Revised from 12-12-12	12-12-12	6	6	Other	12-12-12
7	7	Revised from 12-12-12	12-12-12	7	7	Other	12-12-12
8	8	Revised from 12-12-12	12-12-12	8	8	Other	12-12-12
9	9	Revised from 12-12-12	12-12-12	9	9	Other	12-12-12
10	10	Revised from 12-12-12	12-12-12	10	10	Other	12-12-12

THIS IS NOT A SURVEY.

This Map was prepared for listing and assessment purposes and is NOT to be used for description or conveyance.



FOUNDATION DRAIN TRENCH

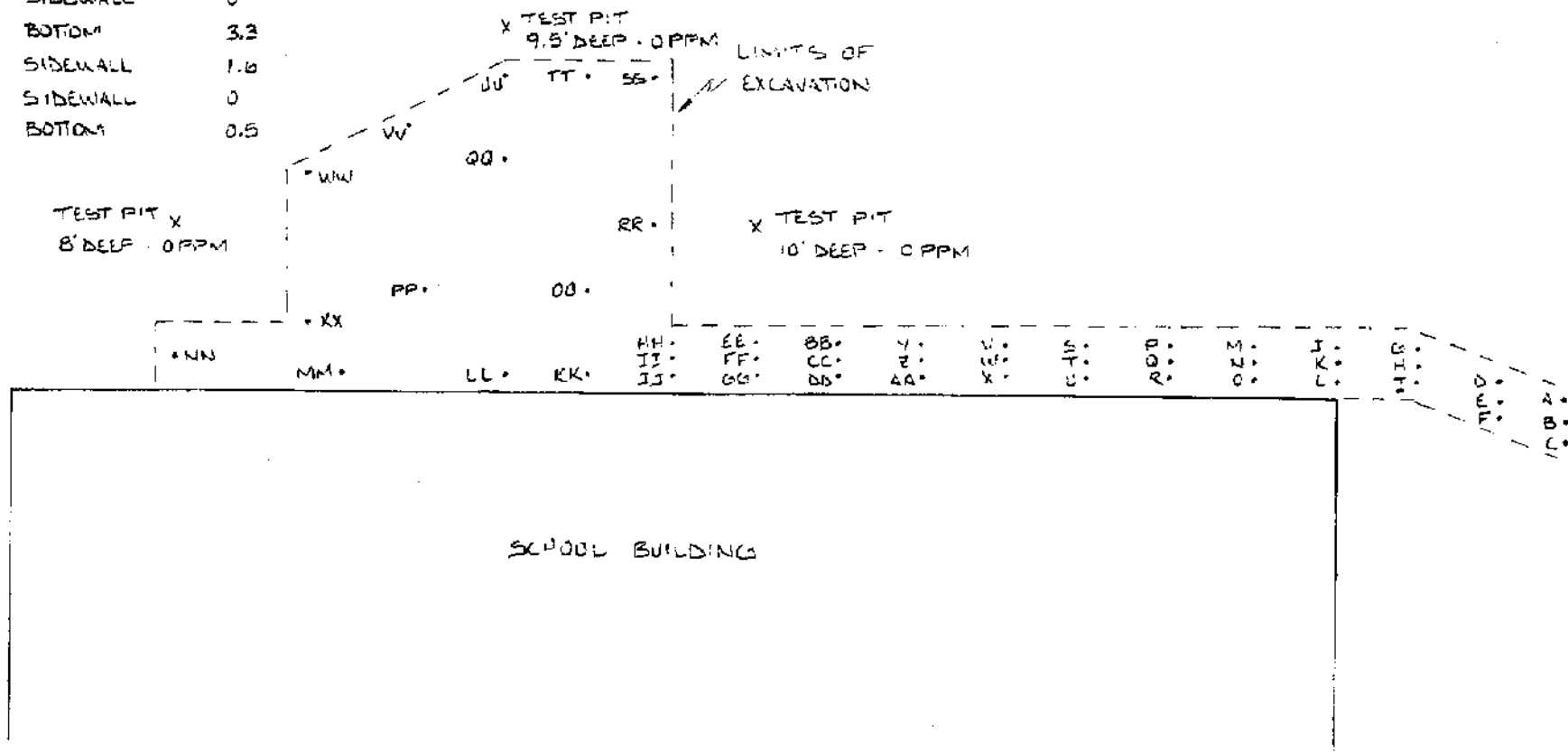
I.D.	LOCATION	READING (PPM)
A	SIDEWALL	0
B	BOTTOM	0.5
C	SIDEWALL	0.1
D	SIDEWALL	0
E	BOTTOM	0.1
F	SIDEWALL	0
G	SIDEWALL	0
H	BOTTOM	0.8
I	SIDEWALL	0
J	SIDEWALL	2.3
K	BOTTOM	0.5
L	SIDEWALL	1.9
M	SIDEWALL	0
N	BOTTOM	1.6
O	SIDEWALL	0.5
P	SIDEWALL	0
Q	BOTTOM	3.2
R	SIDEWALL	1.6
S	SIDEWALL	0
T	BOTTOM	0.5

FOUNDATION DRAIN TRENCH

I.D.	LOCATION	READING (PPM)
U	SIDEWALL	0.5
V	SIDEWALL	0
W	BOTTOM	0
X	SIDEWALL	0.1
Y	SIDEWALL	0
Z	BOTTOM	0.1
AA	SIDEWALL	0.8
BB	SIDEWALL	0
CC	BOTTOM	0.1
DD	SIDEWALL	0.1
EE	SIDEWALL	2.3
FF	BOTTOM	0.8
GG	SIDEWALL	0.5
HH	SIDEWALL	0.8
II	BOTTOM	1.6

JUST EXCAVATION

I.D.	LOCATION	READING (PPM)
JJ	SIDEWALL	0
KK	BLDG - 11' DEEP	0.5
LL	BLDG - 10' DEEP	0.1
MM	BLDG - 8' DEEP	0
NN	BLDG - 6' DEEP	0.1
OO	BOTTOM - 12' DEEP	0.1
PP	BOTTOM - 12' DEEP	0.6
QQ	BOTTOM - 12' DEEP	0.5
RR	SIDE - 11' DEEP	0.1
SS	SIDE - 6' DEEP	0.5
TT	SIDE - 10' DEEP	0.5
UU	SIDE - 6' DEEP	0.5
VV	SIDE - 9' DEEP	0.5
WW	SIDE - 8' DEEP	0.1
XX	SIDE - 6' DEEP	0.1





SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID # 11393
Florida HRS87448

*Aaron + Sons
334 Pleasant Street
Bennington, VT 05201*

May 28, 1998

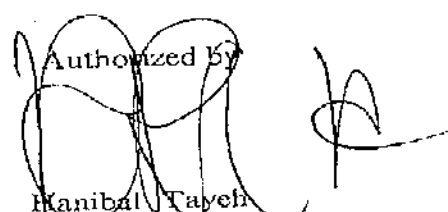
Attn: Jim Davis

Client Project No.:

Location: Beech ST. Schl. Bennington, VT

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AB06816	DISCHARG	EPA Method 8021 TPH by GC

INITIAL DISCHARGE AFTER
CARBON FILTER

Authorized by

Hanibal Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • FAX 413-789-4076

SPECTRUM ANALYTICAL, INC.**Laboratory Report**Client ID: **DISCHARG**Lab ID No: **AB06816**Location: **Beech ST. Schl- Bennington, VT**

Client Job No:

Matrix: **Water**Sampled on 05/26/98 by **AARON + SONS**Received on 05/27/98 by **MBR**

QC and Data Review by

Preservative: **Refrigeration, HCl**Container: **2 VOA Vials**Condition of Sample as Received: **Satisfactory**Delivered by: **UPS****Volatile Organics**

EPA Method 502.2-SW846 8021

Parameter for AB06816	Result (in ug/L)	MDL	Analyzed	Analyst
Benzene	Not detected	0.5	05/27/98	DG
Bromobenzene	Not detected	0.5	05/27/98	DG
Bromochloromethane	Not detected	0.5	05/27/98	DG
Bromodichloromethane	Not detected	0.5	05/27/98	DG
Bromoform	Not detected	0.5	05/27/98	DG
Bromomethane	Not detected	0.5	05/27/98	DG
n-Butylbenzene	Not detected	0.5	05/27/98	DG
sec-Butylbenzene	Not detected	0.5	05/27/98	DG
tert-Butylbenzene	Not detected	0.5	05/27/98	DG
Carbon tetrachloride	Not detected	0.5	05/27/98	DG
Chlorobenzene	Not detected	0.5	05/27/98	DG
Chloroethane	Not detected	0.5	05/27/98	DG
Chloroform	Not detected	0.5	05/27/98	DG
Chloromethane	Not detected	0.5	05/27/98	DG
2-Chlorotoluene	Not detected	0.5	05/27/98	DG
4-Chlorotoluene	Not detected	0.5	05/27/98	DG
Dibromochloromethane	Not detected	0.5	05/27/98	DG
1,2-Dibromo-3-chloropropane	Not detected	0.5	05/27/98	DG
1,2-Dibromoethane	Not detected	0.5	05/27/98	DG
Dibromomethane	Not detected	0.5	05/27/98	DG
1,2-Dichlorobenzene	Not detected	0.5	05/27/98	DG
1,3-Dichlorobenzene	Not detected	0.5	05/27/98	DG
1,4-Dichlorobenzene	Not detected	0.5	05/27/98	DG
Dichlorodifluoromethane	Not detected	0.5	05/27/98	DG
1,1-Dichloroethane	Not detected	0.5	05/27/98	DG
1,2-Dichloroethane	Not detected	0.5	05/27/98	DG
1,1-Dichloroethene	Not detected	0.5	05/27/98	DG
cis-1,2-Dichloroethene	Not detected	0.5	05/27/98	DG
trans-1,2-Dichloroethene	Not detected	0.5	05/27/98	DG
1,2-Dichloropropane	Not detected	0.5	05/27/98	DG
1,3-Dichloropropane	Not detected	0.5	05/27/98	DG
2,2-Dichloropropane	Not detected	0.5	05/27/98	DG
1,1-Dichloropropene	Not detected	0.5	05/27/98	DG
cis-1,3-Dichloropropene	Not detected	0.5	05/27/98	DG

Volatile Organics
EPA Method 502.2-SW846 8021

Parameter for AB06816	Result (in ug/L)	MDL	Analyzed	Analyst
trans-1,3-Dichloropropene	Not detected	0.5	05/27/98	DG
Ethylbenzene	Not detected	0.5	05/27/98	DG
Hexachlorobutadiene	Not detected	0.5	05/27/98	DG
Isopropylbenzene	Not detected	0.5	05/27/98	DG
4-Isopropyltoluene	Not detected	0.5	05/27/98	DG
Methylene chloride	Not detected	0.5	05/27/98	DG
Naphthalene	Not detected	0.5	05/27/98	DG
Propylbenzene	Not detected	0.5	05/27/98	DG
Styrene	Not detected	0.5	05/27/98	DG
1,1,1,2-Tetrachloroethane	Not detected	0.5	05/27/98	DG
1,1,2,2-Tetrachloroethane	Not detected	0.5	05/27/98	DG
Tetrachloroethene	Not detected	0.5	05/27/98	DG
Toluene	Not detected	0.5	05/27/98	DG
1,2,3-Trichlorobenzene	Not detected	0.5	05/27/98	DG
1,2,4-Trichlorobenzene	Not detected	0.5	05/27/98	DG
1,1,1-Trichloroethane	Not detected	0.5	05/27/98	DG
1,1,2-Trichloroethane	Not detected	0.5	05/27/98	DG
Trichloroethene	Not detected	0.5	05/27/98	DG
Trichlorofluoromethane	Not detected	0.5	05/27/98	DG
1,2,3-Trichloropropane	Not detected	0.5	05/27/98	DG
1,2,4-Trimethylbenzene	Not detected	0.5	05/27/98	DG
1,3,5-Trimethylbenzene	Not detected	0.5	05/27/98	DG
Vinyl chloride	Not detected	0.5	05/27/98	DG
o-Xylene	Not detected	0.5	05/27/98	DG
m,p-Xylenes	Not detected	0.5	05/27/98	DG
Methyl-t-butyl ether	Not detected	1.0	05/27/98	DG
Surrogate compound recovery(%):				
2-Bromo-1-chloropropane	Not detected		05/27/98	DG
a,a,a-Trifluorotoluene	Not detected		05/27/98	DG
BFB Surrogate Recovery (%)	79		05/27/98	DG
CLB-d5 Surrogate Recovery (%)	94		05/27/98	DG

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: DISCHARG

Lab ID No.: AB06816

Location: Beech ST. Schl- Bennington, VT

Client Job No.:

Matrix: Water

Collected: 05/26/98 by AARON + SONS

Received on 05/27/98 by MBR

QC and Data Review by

Preservative: Refrigeration

Container: 1 Amber Glass Liter

Condition of Sample as Received: Satisfactory

Delivered by: UPS

Total Hydrocarbons by GC

Modified EPA Method 8100

Parameter	Result (ng/L)	MDL	Extracted	Analyzed	Analyst
Total Hydrocarbons (GC)	0.4		05/28/98	05/28/98	MP

Fingerprint based quantification:

Gasoline	Not detected	0.2	05/28/98	05/28/98	MP
Fuel Oil #2	*	0.4	05/28/98	05/28/98	MP
Fuel Oil #4	Not detected	0.7	05/28/98	05/28/98	MP
Fuel Oil #6	Not detected	0.7	05/28/98	05/28/98	MP
Motor Oil	Not detected	0.7	05/28/98	05/28/98	MP
Ligroin	Not detected	0.4	05/28/98	05/28/98	MP
Aviation Fuel	Not detected	0.4	05/28/98	05/28/98	MP
Other Oil	Not detected	0.7	05/28/98	05/28/98	MP
Unidentified	0.4		05/28/98	05/28/98	MP

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from petroleum products. Possible match categories are as follows;

Gasoline - includes regular, unleaded, premium, etc.

Fuel Oil #2 - includes home heating oil, #2 fuel oil and diesel.

Fuel Oil #4 - Includes #4 Fuel Oil.

Fuel Oil #6 - includes #6 oil and bunker "C" oil.

Motor Oil - includes virgin and waste automobile.

Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha.

Aviation Fuels - includes Kerosene, Jet A and JP-4.

Other Oil - includes lubricating and cutting oil and silicon oil.

Factors such as microbial degradation, weathering and solubility generally prevent specific identification within a petroleum category. A finding of "unidentified" means that the sample fingerprint was characteristic of a petroleum product, but could not be matched to a fingerprint in the library.

After fingerprint identification, the amount present in the sample is quantified using a calibration curve prepared from a petroleum product of the same category as the identified petroleum. Unidentified petroleum is quantified using a petroleum calibration that approximates the distribution of compounds in the sample.

A * in the results column indicates the petroleum calibration used to quantify unidentified samples.

MEMORANDUM



TO: ALL SPECTRUM ANALYTICAL CLIENTELE
 FROM: QA/QC Department of Spectrum Analytical, Inc.
 SUBJECT: SW-846 Methodology

SPECTRUM ANALYTICAL, INC.

This memorandum is being sent in conjunction with Spectrum Analytical's Quality Assurance Communication Procedure (QACP) and its philosophy to provide technical support to its clients. Recently, the EPA has finalized the removal of 14 packed column GC and two other methods from SW-846. For your convenience, listed below are the methods that have been deleted, and the replacement methods for each. For the present time, Spectrum will include these changes with any results sent to our clients.

METHODS REMOVED AND/OR REPLACED FROM SW-846		
Method No. Removed	Method No. Replacement	Title
5040A	5041A	Analysis of Sorbent Cartridges from Volatile Organic Sampling Train (VOST): Gas Chromatography/Mass Spectrometry Technique
8010B	8021B	Halogenated Volatile Organics by Gas Chromatography
8020A	8021B	Aromatic Volatile Organics by Gas Chromatography
8030A	8031	Acrolein and Acrylonitrile by Gas Chromatography
8040A	8041	Phenols by Gas Chromatography
8060	8061A	Phthalate Esters
8080A	8081A (Pesticides) 8082 (PCB's)	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography
8090	8091	Nitroaromatics and Cyclic Ketones
8110	8111	Haloethers by Gas Chromatography
8120A	8121	Chlorinated Hydrocarbons by Gas Chromatography
8140	8141A	Organophosphorus Pesticides
8150B	8151A	Chlorinated Herbicides by Gas Chromatography
8240B	8260B	Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS)
8250A	8270C	Semiovolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
9200	9210	Nitrate
9252A		Chloride (Titrimetric, Mercuric Nitrate)
	9253	Chloride (Titrimetric, Silver Nitrate)

Spectrum Analytical, Inc. Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected, Not Det, ND or nd	=	<i>The compound was not detected at a concentration equal to or above the established method detection limit.</i>
NC	=	<i>Not Calculated</i>
MCL	=	<i>EPA Maximum Contamination Level</i>
VOA	=	<i>Volatile Organic Analysis</i>
BFB	=	<i>4-Bromofluorobenzene (an EPA 624 Surrogate)</i>
p-DFB	=	<i>1,4-Difluorobenzene (an EPA 624 Surrogate)</i>
CLB-d5	=	<i>Chlorobenzene-d5 (an EPA 624 Surrogate)</i>
BCP	=	<i>2-Bromo-1-chloropropane (an EPA 601 Surrogate)</i>
TFT	=	<i>2,2,2-Trifluorotoluene (an EPA 602 Surrogate)</i>
Decachlorobiphenyl	=	<i>(an EPA 608/8080 Surrogate)</i>

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (%RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2})}{\text{ave. value}} * 100\%$$

SA

Page 1 of 1

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076

SPECTRUM ANALYTICAL, INC.
Laboratory Report

STOCKPILED / SHIPPED
SOILS

Client ID: CORE-A
Lab ID No.: AB04135

Location: Southwest VT Supervisory Union
Client Job No.: 40092

Matrix: Soil
Collected: 04/29/98 by ECS-VT
Received on 04/29/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total Hydrocarbons by GC
Modified EPA Method 8100

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
Total Hydrocarbons (GC)	5,200		04/30/98	04/30/98	ATP
Fingerprint based quantification:					
Gasoline	Not detected	40	04/30/98	04/30/98	ATP
Fuel Oil #2	5,200	40	04/30/98	04/30/98	ATP
Fuel Oil #4	Not detected	40	04/30/98	04/30/98	ATP
Fuel Oil #6	Not detected	80	04/30/98	04/30/98	ATP
Motor Oil	Not detected	80	04/30/98	04/30/98	ATP
Ligroin	Not detected	40	04/30/98	04/30/98	ATP
Aviation Fuel	Not detected	40	04/30/98	04/30/98	ATP
Other Oil	Not detected	80	04/30/98	04/30/98	ATP
Unidentified	Not detected		04/30/98	04/30/98	ATP
% Solids	81.5	0.1	04/30/98	04/30/98	KS

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from petroleum products. Possible match categories are as follows:

- Gasoline - includes regular, unleaded, premium, etc.
- Fuel Oil #2 - includes home heating oil, #2 fuel oil and diesel.
- Fuel Oil #4 - Includes #4 Fuel Oil.
- Fuel Oil #6 - includes #6 oil and bunker "C" oil.
- Motor Oil - includes virgin and waste automobile.
- Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha.
- Aviation Fuels - includes Kerosene, Jet A and JP-4.
- Other Oil - includes lubricating and cutting oil and silicon oil.

Factors such as microbial degradation, weathering and solubility generally prevent specific identification within a petroleum category. A finding of "unidentified" means that the sample fingerprint was characteristic of a petroleum product, but could not be matched to a fingerprint in the library.

After fingerprint identification, the amount present in the sample is quantified using a calibration curve prepared from a petroleum product of the same category as the identified petroleum. Unidentified petroleum is quantified using a petroleum calibration that approximates the distribution of compounds in the sample.

A * in the results column indicates the petroleum calibration used to quantify unidentified samples.

SPECTRUM ANALYTICAL, INC.
Laboratory Report

Client ID: CORE-B
Lab ID No.: AB04136

Location: Southwest VT Supervisory Union
Client Job No.: 40092

Matrix: Soil
Collected: 04/29/98 by ECS-VT
Received on 04/29/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total Hydrocarbons by GC
Modified EPA Method 8100

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
Total Hydrocarbons (GC)	5,800		04/30/98	04/30/98	ATP
Fingerprint based quantification:					
Gasoline	Not detected	40	04/30/98	04/30/98	ATP
Fuel Oil #2	5,800	40	04/30/98	04/30/98	ATP
Fuel Oil #4	Not detected	40	04/30/98	04/30/98	ATP
Fuel Oil #6	Not detected	80	04/30/98	04/30/98	ATP
Motor Oil	Not detected	80	04/30/98	04/30/98	ATP
Ligroln	Not detected	40	04/30/98	04/30/98	ATP
Aviation Fuel	Not detected	40	04/30/98	04/30/98	ATP
Other Oil	Not detected	80	04/30/98	04/30/98	ATP
Unidentified	Not detected		04/30/98	04/30/98	ATP
% Solids	80.5	0.1	04/30/98	04/30/98	KS

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from petroleum products. Possible match categories are as follows:

- Gasoline - includes regular, unleaded, premium, etc.
- Fuel Oil #2 - includes home heating oil, #2 fuel oil and diesel.
- Fuel Oil #4 - Includes #4 Fuel Oil.
- Fuel Oil #6 - includes #6 oil and bunker "C" oil.
- Motor Oil - includes virgin and waste automobile.
- Ligroln - includes mineral spirits, petroleum naphtha, vm&tp naphtha.
- Aviation Fuels - includes Kerosene, Jet A and JP-4.
- Other Oil - includes lubricating and cutting oil and silicon oil.

Factors such as microbial degradation, weathering and solubility generally prevent specific identification within a petroleum category. A finding of "unidentified" means that the sample fingerprint was characteristic of a petroleum product, but could not be matched to a fingerprint in the library.

After fingerprint identification, the amount present in the sample is quantified using a calibration curve prepared from a petroleum product of the same category as the identified petroleum. Unidentified petroleum is quantified using a petroleum calibration that approximates the distribution of compounds in the sample.

A * in the results column indicates the petroleum calibration used to quantify unidentified samples.

SPECTRUM ANALYTICAL, INC.
Laboratory Report

Client ID: COMPOSIT
Lab ID No.: AB04137

Location: Southwest VT Supervisory Union
Client Job No.: 40092

Matrix: Soil
Collected: 04/29/98 by ECS-VT
Received on 04/29/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total Hydrocarbons by GC
Modified EPA Method 8100

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
Total Hydrocarbons (GC)	2,900		04/30/98	04/30/98	ATP
Fingerprint based quantification:					
Gasoline	Not detected	40	04/30/98	04/30/98	ATP
Fuel Oil #2	2,900	40	04/30/98	04/30/98	ATP
Fuel Oil #4	Not detected	40	04/30/98	04/30/98	ATP
Fuel Oil #6	Not detected	80	04/30/98	04/30/98	ATP
Motor Oil	Not detected	80	04/30/98	04/30/98	ATP
Ligroin	Not detected	40	04/30/98	04/30/98	ATP
Aviation Fuel	Not detected	40	04/30/98	04/30/98	ATP
Other Oil	Not detected	80	04/30/98	04/30/98	ATP
Unidentified	Not detected		04/30/98	04/30/98	ATP
% Solids	85.0	0.1	04/30/98	04/30/98	KS

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from petroleum products. Possible match categories are as follows;

- Gasoline - includes regular, unleaded, premium, etc.
- Fuel Oil #2 - includes home heating oil, #2 fuel oil and diesel.
- Fuel Oil #4 - includes #4 Fuel Oil.
- Fuel Oil #6 - includes #6 oil and bunker "C" oil.
- Motor Oil - includes virgin and waste automobile.
- Ligroin - includes mineral spirits, petroleum naphtha, vm&np naphtha.
- Aviation Fuel - includes Kerosene, Jet A and JP-4.
- Other Oil - includes lubricating and cutting oil and silicon oil.

Factors such as microbial degradation, weathering and solubility generally prevent specific identification within a petroleum category. A finding of "unidentified" means that the sample fingerprint was characteristic of a petroleum product, but could not be matched to a fingerprint in the library.

After fingerprint identification, the amount present in the sample is quantified using a calibration curve prepared from a petroleum product of the same category as the identified petroleum. Unidentified petroleum is quantified using a petroleum calibration that approximates the distribution of compounds in the sample.

A * in the results column indicates the petroleum calibration used to quantify unidentified samples.



1801 EAST STREET
PITTSFIELD, MA 01201
413 499-0050
FAX 413 443-0511

UST EXCAVATION LIMITS

Technical Report

prepared for

Aaron & Sons, Inc.
334 Pleasant Street
Bennington, VT 05201

Project: Beech St. School

Attention: James Davis

June 11, 1998



Issue Date
11 June 98

Report Number
1998\Aaron\Beech St\052898

LABORATORY SERVICES TECHNICAL REPORT

PREPARED FOR:

Aaron & Sons, Inc.
334 Pleasant Street
Bennington, VT 05201
(802) 447-8633

PROJECT: - Beech St. School

ATTENTION: James Davis

Two (2) soil samples for VOC analysis and two (2) soil samples for TPH analysis were received by the Maxmillian Technologies' Analytical Laboratory on May 28, 1998. An expedited turn around time was requested.

All samples were analyzed within the method specified maximum allowed holding times. All quality control was within laboratory determined acceptable limits.

All samples are analyzed by EPA approved methodologies. The MT analytical laboratory is a MA DEP and NY DOH certified testing facility.

MA Certification Number M-MA 146

NY Certification Number 11477

Report Reviewed By:

Date:

6/11/98

John M. Massimiano
Laboratory Director



Issue Date
11 June 98

Report Number
1998\Aaron\Beech St\052898

SAMPLE RECEPTION INFORMATION

Project Beech St. School		Purchase Order	Requested TAT ASAP			
Quantity	Matrix	Analysis Method	Description	Collection Date	Preservative	
2	Soil	8260A	VOCs	28 May 98	Cool 4°C	
2	Soil	8100M	TPH	28 May 98	Cool 4°C	

Samples inspected upon receipt by:
LM

Date Received
28 May 98



Issue Date
11 June 98

Report Number
1998\Aaron\Beech St\052898

ANALYSIS INFORMATION
Volatile Organic Compounds

Sample ID	Bottom 1				
Analysis EPA Method 8260B	Extraction Method 5035		Analyst JM	Instrument GC-MS	
Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)	Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)
Dichlorodifluoromethane	ND	0.100	1,3-Dichloropropane	ND	0.100
Chloromethane	ND	0.100	Chlorodibromomethane	ND	0.100
Vinyl chloride	ND	0.100	1,2-Dibromoethane(EDB)	ND	0.100
Bromomethane	ND	0.100	Bromoform	ND	0.100
Chloroethane	ND	0.100	2-Hexanone (MBK)	ND	1.00
Trichlorofluoromethane	ND	0.100	Toluene	ND	0.100
Acetone	ND	1.50	4-Methyl-2-Pentanone	ND	1.00
1,1-Dichloroethene	ND	0.100	Tetrachloroethene	ND	0.100
Acrylonitrile	ND	1.00	Chlorobenzene	ND	0.100
Iodomethane	ND	0.100	1,1,1,2-Tetrachloroethane	ND	0.100
Methylene chloride	ND	1.00	Ethylbenzene	ND	0.100
Carbon disulfide	ND	0.100	m,p-Xylene	ND	0.100
cis-1,2-Dichloroethene	ND	0.100	o-Xylene	ND	0.100
Acrolein	ND	1.00	Styrene	ND	0.100
trans-1,2-Dichloroethene	ND	0.100	1,1,2,2-Tetrachloroethane	ND	0.100
Methyl-t-butyl ether (MtBE)	ND	0.100	Isopropylbenzene	ND	0.100
1,1-Dichloroethane	ND	0.100	1,2,3-Trichloropropane	ND	0.100
Chloroform	ND	0.100	Bromobenzene	ND	0.100
1,2-Dichloroethane	ND	0.100	2-Chlorotoluene	ND	0.100
Vinyl acetate	ND	1.00	n-Propylbenzene	ND	0.100
2-Butanone (MEK)	ND	1.00	4-Chlorotoluene	ND	0.100
2,2-Dichloropropane	ND	0.100	1,3,5-Trimethylbenzene	ND	0.100
1,1,1-Trichloroethane	ND	0.100	tert-Butylbenzene	ND	0.100
1,1-Dichloropropene	ND	0.100	1,2,4-Trimethylbenzene	ND	0.100
Benzene	ND	0.100	1,3-Dichlorobenzene	ND	0.100
Carbon Tetrachloride	ND	0.100	p-Isopropyltoluene	ND	0.100
Trichloroethene	ND	0.100	1,4-Dichlorobenzene	ND	0.100
Dibromomethane	ND	0.100	sec-Butylbenzene	ND	0.100
1,2-dichloropropane	ND	0.100	1,2-Dichlorobenzene	ND	0.100
Bromodichloromethane	ND	0.100	n-Butylbenzene	ND	0.100
2-Chloroethyl vinyl ether	ND	0.100	1,2-Dibromo-3-chloropropane	ND	0.100
cis-1,3-Dichloropropene	ND	0.100	1,2,4-Trichlorobenzene	ND	0.100
trans-1,3-Dichloropropene	ND	0.100	Naphthalene	ND	0.100
1,1,2-Trichloroethane	ND	0.100	Hexachlorobutadiene	ND	1.00
			1,2,3-Trichlorobenzene	ND	0.100

Sample Analysis Information, QC Lot Identification

Extraction Date
09 June 98

Analysis Date
09 June 98

QC Lot:
0605988082-S

Surrogate Compound % Recovery, QC Lot Identification

1,2-Dichloroethane-d4
111%

Toluene-d8
106%

4-Bromofluorobenzene
105%



Issue Date
11 June 98

Report Number
1998\Aaron\Beech St.\052898

Volatile Organic Compounds

Sample ID	Side 2		Analyst	Instrument	
Analysis	Extraction Method		JM	GC-MS	
EPA Method 8260B	5035				
Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)	Parameter	Sample Result (mg/Kg)	MDL (mg/Kg)
Dichlorodifluoromethane	ND	0.100	1,3-Dichloropropane	ND	0.100
Chloromethane	ND	0.100	Chlorodibromomethane	ND	0.100
Vinyl chloride	ND	0.100	1,2-Dibromoethane(EDB)	ND	0.100
Bromomethane	ND	0.100	Bromoform	ND	0.100
Chloroethane	ND	0.100	2-Hexanone (MBK)	ND	1.00
Trichlorofluoromethane	ND	0.100	Toluene	ND	0.100
Acetone	ND	1.50	4-Methyl-2-Pentanone	ND	1.00
1,1-Dichloroethene	ND	0.100	Tetrachloroethene	ND	0.100
Acrylonitrile	ND	1.00	Chlorobenzene	ND	0.100
Iodomethane	ND	0.100	1,1,1,2-Tetrachloroethane	ND	0.100
Methylene chloride	ND	1.00	Ethylbenzene	ND	0.100
Carbon disulfide	ND	0.100	m,p-Xylene	ND	0.100
cis-1,2-Dichloroethane	ND	0.100	o-Xylene	ND	0.100
Acrolein	ND	1.00	Styrene	ND	0.100
trans-1,2-Dichloroethene	ND	0.100	1,1,2,2-Tetrachloroethane	ND	0.100
Methyl-t-butyl ether (MTBE)	ND	0.100	Isopropylbenzene	ND	0.100
1,1-Dichloroethane	ND	0.100	1,2,3-Trichloropropane	ND	0.100
Chloroform	ND	0.100	Bromobenzene	ND	0.100
1,2-Dichloroethane	ND	0.100	2-Chlorotoluene	ND	0.100
Vinyl acetate	ND	1.00	n-Propylbenzene	ND	0.100
2-Butanone (MEK)	ND	1.00	4-Chlorotoluene	ND	0.100
2,2-Dichloropropane	ND	0.100	1,3,5-Trimethylbenzene	ND	0.100
1,1,1-Trichloroethane	ND	0.100	tert-Butylbenzene	ND	0.100
1,1-Dichloropropene	ND	0.100	1,2,4-Trimethylbenzene	ND	0.100
Benzene	ND	0.100	1,3-Dichlorobenzene	ND	0.100
Carbon Tetrachloride	ND	0.100	p-Isopropyltoluene	ND	0.100
Trichloroethene	ND	0.100	1,4-Dichlorobenzene	ND	0.100
Dibromomethane	ND	0.100	sec-Butylbenzene	ND	0.100
1,2-dichloropropane	ND	0.100	1,2-Dichlorobenzene	ND	0.100
Bromodichloromethane	ND	0.100	n-Butylbenzene	ND	0.100
2-Chloroethyl vinyl ether	ND	0.100	1,2-Dibromo-3-chloropropane	ND	0.100
cis-1,3-Dichloropropene	ND	0.100	1,2,4-Trichlorobenzene	ND	0.100
trans-1,3-Dichloropropene	ND	0.100	Naphthalene	ND	0.100
1,1,2-Trichloroethane	ND	0.100	Hexachlorobutadiene	ND	1.00
			1,2,3-Trichlorobenzene	ND	0.100

Sample Analysis Information, QC Lot identification

Extraction Date
06 June 978

Analysis Date
09 June 98

QC Lot:
0605988260-S

Surrogate Compound % Recovery, QC Lot identification

1,2-Dichloroethane-d4
106%

Toluene-d8
95.8%

4-Bromofluorobenzene
95.6%



Issue Date
11 June 98

Report Number
1998\Aaron\Beech St\052898

Total Petroleum Hydrocarbons

Analysis Required
EPA Method 8100M

Extraction Method
3550B

Analyst
CR

Instrument
GC-FID

Sample ID	Bottom 3	Bottom 4	MDL
	(mg/Kg)	(mg/Kg)	(mg/Kg)
Parameter			
TPH	ND	ND	15.0

QC Lot:
0501988100-L

MDL = Method Detection Limit.

ND = Analyte of interest was not detected at the laboratory determined Analytical Method Detection Limit.



Issue Date
11 June 98

Report Number
1998\Aaron\Beech St\052898

QC LOT INFORMATION / VOLATILE ORGANIC COMPOUNDS

QA/QC Lot:	Compound	MS/MSD Limit	% Recovery MS	% Recovery MSD	% RPD	RPD Limit
0605988260-S	1,1-Dichloroethene	31-128	109%	109%	0.00%	13
	Benzene	72-101	91.2%	95.1%	4.15%	6
	Trichloroethene	62-94	85.5%	84.1%	1.68%	6
	Toluene	73-104	91.7%	93.3%	1.76%	15
	Chlorobenzene	74-102	92.7%	91.9%	0.88%	5

Note: % Recovery and RPD Limits are determined by demonstrated laboratory performance.

QC LOT INFORMATION /TPH

QA/QC Lot:	Sample ID.	MS/MSD Limit	% Recovery MS	% Recovery MSD	% RPD	RPD Limit
0601988100-L	NA	82-110	98.6%	102%	3.52%	7

Note: % Recovery and RPD Limits are determined by demonstrated laboratory performance.



CHAIN OF CUSTODY RECORD

Client: <u>AARON + Sons</u> Date: <u>5/28/98</u> Report To: <u>Jim Davis</u> Address: <u>334 Pleasant St. Bndn., VT 05201</u> Telephone: <u>802-447-8633</u>	Project Name: <u>BEECH ST. SCHOOL</u> Project Number: <u>N/A</u> Address: _____ Date Samples Collected: <u>5/28/98</u> By: <u>Jim Davis</u>
--	---

Sampling Information					Analysis Required	# Of Cont.	Type of Cont.	Pres.	Comments: (special instruction, cautions, etc.)
ID#	Date	Time	Location	Sample Type					
BOTTOM 1	5/28	2pm		8260 SOIL	8260	1	Glass		
SIDE 2	5/28	2pm		SOIL	8260	1	Glass		
BOTTOM 3	5/28	2pm		SOIL	8100 M				
BOTTOM 4	5/28	2pm		SOIL	8100 M	1	Glass		

REMARKS: (special instructions, sample storage, non-standard sample bottles, etc.)

Please fax results as soon as available # 802-447-3571 THANKS

Please call when results will be available

Relinquished by: W. Davis Date: 5/28/98
 Received by: Greg Barlow Date: 5/28/98

Relinquished by: Greg Barlow Date: 5/28/98
 Received by: Maxymillian Date: 5/28/98

Relinquished by: _____ Date: _____
 Received by: _____ Date: _____

Turnaround: 24 hrs. _____ 48 hrs. _____ 1 week _____ 2 weeks _____ 4 weeks _____ Other ASAP



1801 EAST STREET
PITTSFIELD MA 01201
413 499-3050
FAX 413 443-0511

DISCHARGE PRIOR TO
TREATMENT 8 JUN 98

Technical Report

prepared for

Aaron & Sons, Inc.
334 Pleasant Street
Bennington, VT 05201

Project: Beech St.

Attention: James Davis

June 22, 1998



Issue Date
22 June 98

Report Number
1998\Aaron\Beech St.1060898

LABORATORY SERVICES TECHNICAL REPORT

PREPARED FOR:

Aaron & Sons, Inc.
334 Pleasant Street
Bennington, VT 05201
(802) 447-8633

PROJECT: - Beech St.

ATTENTION: James Davis

One (1) water sample for TPH analysis and one (1) water sample for VOC (8021) analysis were received by the Maxymillian Technologies' Analytical Laboratory on June 8, 1998. An expedited turn around time was requested.

The VOC water sample was analyzed at *Spectrum Analytical, Inc.* Agawam, MA

All samples were analyzed within the method specified maximum allowed holding times. All quality control was within laboratory determined acceptable limits.

All samples are analyzed by EPA approved methodologies. The MT analytical laboratory is a MA DEP and NY DOH certified testing facility.

MA Certification Number M-MA 146

NY Certification Number 11477

Report Reviewed By:

Date:

6/22/98

John M. Massimiano
Laboratory Director



Issue Date
22 June 98

Report Number
1998\Aaron\Beech St\060898

SAMPLE RECEPTION INFORMATION

Project Beech St.		Purchase Order	Requested TAT ASAP			
Quantity	Matrix	Analysis Method	Description	Collection Date	Preservative	
1	Water	8021 (Spectrum)	VOCs	08 June 98	Cool 4°C/HCl	
1	Water	8100M	TPH	08 June 98	Cool 4°C	

Samples inspected upon receipt by:
LM

Date Received
08 June 98



Issue Date
22 June 98

Report Number
1998\Aaron\Becch St.\060898

ANALYSIS INFORMATION

Total Petroleum Hydrocarbons

Analysis Required
EPA Method 8100M

Extraction Method
3510C

Analyst
CR

Instrument
GC-FID

Sample ID DISCHARGE		MDL
Parameter	(mg/L)	(mg/L)
TPH	ND	0.500

QC Lot:
0612988100-W

MDL = Method Detection Limit.



86 South Main Street • Lanesboro, MA 01237 • (413) 499-9862



SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID #11393
Florida HRS87448

Maxymillian Technologies
86 South Main Street
Lanesboro, MA 02137

June 22, 1998

Attn: John Massimiano

Client Project No.: 98057

Location: Beech Street

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AB08716	DISCHARG	EPA Method 8021

Authorized by

Manibal Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • FAX 413-789-4076

Jun 22 '98 10:52 P.01

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: DISCHARG
Lab ID No: AB08716

Location: Beech Street
Client Job No: 98057

Matrix: Water
Sampled on 06/08/98 by MAXYMILLIAN
Received on 06/11/98 by MBR
QC and Data Review by

Preservative: Refrigeration, HCl
Container: 1 VOA Vial
Condition of Sample as Received: Satisfactory
Delivered by: Client

Volatile Organics

EPA Method 502.2-SW846 8021

Parameter for AB08716	Result (in ug/L)	MDL	Analyzed	Analyst
Benzene	Not detected	0.5	06/20/98	CH
Bromobenzene	Not detected	0.5	06/20/98	CH
Bromochloromethane	Not detected	0.5	06/20/98	CH
Bromodichloromethane	Not detected	0.5	06/20/98	CH
Bromoform	Not detected	0.5	06/20/98	CH
Bromomethane	Not detected	0.5	06/20/98	CH
n-Butylbenzene	Not detected	0.5	06/20/98	CH
sec-Butylbenzene	Not detected	0.5	06/20/98	CH
tert-Butylbenzene	Not detected	0.5	06/20/98	CH
Carbon tetrachloride	Not detected	0.5	06/20/98	CH
Chlorobenzene	Not detected	0.5	06/20/98	CH
Chloroethane	Not detected	0.5	06/20/98	CH
Chloroform	Not detected	0.5	06/20/98	CH
Chloromethane	Not detected	0.5	06/20/98	CH
2-Chlorotoluene	Not detected	0.5	06/20/98	CH
4-Chlorotoluene	Not detected	0.5	06/20/98	CH
Dibromochloromethane	Not detected	0.5	06/20/98	CH
1,2-Dibromo-3-chloropropane	Not detected	0.5	06/20/98	CH
1,2-Dibromoethane	Not detected	0.5	06/20/98	CH
Dibromomethane	Not detected	0.5	06/20/98	CH
1,2-Dichlorobenzene	Not detected	0.5	06/20/98	CH
1,3-Dichlorobenzene	Not detected	0.5	06/20/98	CH
1,4-Dichlorobenzene	Not detected	0.5	06/20/98	CH
Dichlorodifluoromethane	Not detected	0.5	06/20/98	CH
1,1-Dichloroethane	Not detected	0.5	06/20/98	CH
1,2-Dichloroethane	Not detected	0.5	06/20/98	CH
1,1-Dichloroethene	Not detected	0.5	06/20/98	CH
cis-1,2-Dichloroethene	Not detected	0.5	06/20/98	CH
trans-1,2-Dichloroethene	Not detected	0.5	06/20/98	CH
1,2-Dichloropropane	Not detected	0.5	06/20/98	CH
1,3-Dichloropropane	Not detected	0.5	06/20/98	CH
2,2-Dichloropropane	Not detected	0.5	06/20/98	CH
1,1-Dichloropropene	Not detected	0.5	06/20/98	CH
cis-1,3-Dichloropropene	Not detected	0.5	06/20/98	CH

Continued next page...

Jun 22 '98 10:52 P.02

Volatile Organics
EPA Method 502.2-SW846 8021

Parameter for AB08716	Result (in ug/L)	MDL	Analyzed	Analyst
trans-1,3-Dichloropropene	Not detected	0.5	06/20/98	CH
Ethylbenzene	Not detected	0.5	06/20/98	CH
Hexachlorobutadiene	Not detected	0.5	06/20/98	CH
Isopropylbenzene	Not detected	0.5	06/20/98	CH
4-Isopropyltoluene	Not detected	0.5	06/20/98	CH
Methylene chloride	Not detected	0.5	06/20/98	CH
Naphthalene	Not detected	0.5	06/20/98	CH
Propylbenzene	Not detected	0.5	06/20/98	CH
Styrene	Not detected	0.5	06/20/98	CH
1,1,1,2-Tetrachloroethane	Not detected	0.5	06/20/98	CH
1,1,2,2-Tetrachloroethane	Not detected	0.5	06/20/98	CH
Tetrachloroethene	Not detected	0.5	06/20/98	CH
Toluene	Not detected	0.5	06/20/98	CH
1,2,3-Trichlorobenzene	Not detected	0.5	06/20/98	CH
1,2,4-Trichlorobenzene	Not detected	0.5	06/20/98	CH
1,1,1-Trichloroethane	Not detected	0.5	06/20/98	CH
1,1,2-Trichloroethane	Not detected	0.5	06/20/98	CH
Trichloroethene	Not detected	0.5	06/20/98	CH
Trichlorofluoromethane	Not detected	0.5	06/20/98	CH
1,2,3-Trichloropropane	Not detected	0.5	06/20/98	CH
1,2,4-Trimethylbenzene	Not detected	0.5	06/20/98	CH
1,3,5-Trimethylbenzene	Not detected	0.5	06/20/98	CH
Vinyl chloride	Not detected	0.5	06/20/98	CH
o-Xylene	Not detected	0.5	06/20/98	CH
m,p-Xylenes	Not detected	1.0	06/20/98	CH
Methyl-t-butyl ether	Not detected	0.5	06/20/98	CH
Surrogate compound recovery(%):			06/20/98	CH
2-Bromo-1-chloropropane	NC		06/20/98	CH
a,a,a-Trifluorotoluene	NC		06/20/98	CH
BFB Surrogate Recovery (%)	94		06/20/98	CH
CLB-d5 Surrogate Recovery (%)	107			

MEMORANDUM



TO: ALL SPECTRUM ANALYTICAL CLIENTELE
FROM: From the QA/QC Department of Spectrum Analytical, Inc.
SUBJECT: SW-846 Methodology

SPECTRUM ANALYTICAL, INC.

This memorandum is being sent in conjunction with Spectrum Analytical's Quality Assurance Communication Procedure (QACP) and its philosophy to provide technical support to its clients. Recently, the EPA has finalized the removal of 14 packed column GC and two other methods from SW-846. For your convenience, listed below are the methods that have been deleted, and the replacement methods for each. For the present time, Spectrum will include these changes with any results sent to our clients.

METHODS REMOVED AND/OR REPLACED FROM SW-846		
Method No. Removed	Method No. Replacement	Title
5040A	5041A	Analysis of Sorbent Cartridges from Volatile Organic Sampling Train (VOST): Gas Chromatography/Mass Spectrometry Technique
8010B	8021B	Halogenated Volatile Organics by Gas Chromatography
8020A	8021B	Aromatic Volatile Organics by Gas Chromatography
8030A	8031	Acrolein and Acrylonitrile by Gas Chromatography
8040A	8041	Phenols by Gas Chromatography
8060	8061A	Phthalate Esters
8080A	8081A (Pesticides) 8082 (PCB's)	Organochlorine Pesticides and Polychlorinated Biphenyls by Gas Chromatography
8090	8091	Nitroaromatics and Cyclic Ketones
8110	8111	Haloethers by Gas Chromatography
8120A	8121	Chlorinated Hydrocarbons by Gas Chromatography
8140	8141A	Organophosphorus Pesticides
8150B	8151A	Chlorinated Herbicides by Gas Chromatography
8240B	8260B	Volatile Organics by Gas Chromatography/Mass Spectrometry (GC/MS)
8250A	8270C	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
9200	9210	Nitrate
9252A		Chloride (Titrimetric, Mercuric Nitrate)
	9253	Chloride (Titrimetric, Silver Nitrate)

f:\spectrum\qaqc\007

ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • FAX 413-789-4076

Jun 22 10:53 86. ZZ unc

Spectrum Analytical, Inc. Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected, Not Det, ND or nd	=	The compound was not detected at a concentration equal to or above the established method detection limit.
NC	=	Not Calculated
MCL	=	EPA Maximum Contamination Level
VOA	=	Volatile Organic Analysis
BFB	=	4-Bromofluorobenzene (an EPA 624 Surrogate)
p-DFB	=	1,4-Difluorobenzene (an EPA 624 Surrogate)
CLB-d5	=	Chlorobenzene-d5 (an EPA 624 Surrogate)
BCP	=	2-Bromo-1-chloropropane (an EPA 601 Surrogate)
TFT	=	2,2,2-Trifluorotoluene (an EPA 602 Surrogate)
Decachlorobiphenyl	=	(an EPA 608/8080 Surrogate)

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (%RPD) = The precision measurement obtained on duplicate/replicate analyses.
%RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2})}{\text{ave. value}} \times 100\%$$



DATE	TIME	PAGE
JUN 22 '98	10:54	P.06

86 South Main Street • Lanesboro, MA 01237 • (413) 499-9862



1001 EAST STREET
PITTSFIELD, MA 01201
413 499-3050
FAX 413 483-0511

DISCHARGE PRIOR TO
TREATMENT 24 JUN 98

Technical Report

prepared for

Aaron & Sons, Inc.
334 Pleasant Street
Bennington, VT 05201

Project: Beech St.

Attention: James Davis

July 3, 1998



Issue Date
03 July 98

Report Number
1998\Aaron\Beech St\062498

LABORATORY SERVICES TECHNICAL REPORT

PREPARED FOR:

Aaron & Sons, Inc.
334 Pleasant Street
Bennington, VT 05201
(802) 447-8633

PROJECT: - Beech St.

ATTENTION: James Davis

One (1) water sample for TPH analysis and one (1) water sample for VOC (8021) analysis were received by the Maxymillian Technologies' Analytical Laboratory on June 24, 1998. A ten (10) business day turn around time was requested.

The VOC water sample was analyzed at *Spectrum Analytical, Inc.* Agawam, MA

All samples were analyzed within the method specified maximum allowed holding times. All quality control was within laboratory determined acceptable limits.

All samples are analyzed by EPA approved methodologies. The MT analytical laboratory is a MA DEP and NY DOH certified testing facility.

MA Certification Number M-MA 146

NY Certification Number 11477

Report Reviewed By.

Date:

John M. Massimiano
Laboratory Director



Issue Date
03 July 98

Report Number
1998/Aaron/Beech St/062498

SAMPLE RECEPTION INFORMATION

Project Beech St.		Purchase Order	Requested TAT 10 Business Days			
Quantity	Matrix	Analysis Method	Description	Collection Date	Preservative	
1	Water	8021 (Spectrum)	VOCs	24 June 98	Cool 4°C/HCl	
1	Water	8100M	TPH	24 June 98	Cool 4°C	

Samples inspected upon receipt by:
LM

Date Received
24 June 98



Issue Date
03 July 98

Report Number
1998\Aaron\Berch St\062498

ANALYSIS INFORMATION

Total Petroleum Hydrocarbons

Analysis Required EPA Method 8100M	Extraction Method 3510C	Analyst CR	Instrument GC-FID
Sample ID DISCHARGE			MDL
			(mg/L)
Parameter	(mg/L)		0.500
TPH	ND		

QC Lot:
0612988100-W

MDL = Method Detection Limit.



Issue Date
03 July 98

Report Number
1998\Aaron\Beech St\062498

QC LOT INFORMATION /TPH

QA/QC Lot:	Sample ID.	MS/MSD Limit	% Recovery MS	% Recovery MSD	% RPD	RPD Limit
0612988100-W	NA	33-142	92.7%	97.9%	5.00%	18

Note: % Recovery and RPD Limits are determined by demonstrated laboratory performance.



CHAIN OF CUSTODY RECORD

[illegible]

MAYY TECH INC

007/012



SPECTRUM ANALYTICAL, INC.
Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 94 & Maine # n/a
New Hampshire ID # 2538
New York ID # 11393
Florida HRS87448

July 2, 1998

Maxymillian Technologies
26 South Main Street
Lanesboro, MA 02137

Attn: John Massimiano

Client Project No.: 98057

Location: Beech St Schl - Bennington, MA

Lab ID No.

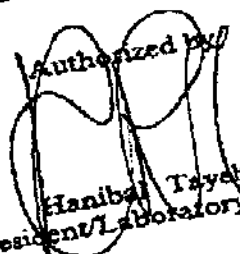
AB10923

Client ID

DISCHARG

Analysis Requested

EPA Method 8021

Authorized by

Hanibal Tzyeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

Massachusetts 01001 • 413-789-9018 • FAX 413-789-4076

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Location: Beech St Schl - Bennington, MA
Client Job No: 98057

Client ID: DISCHARG
Lab ID No: AB10323

Matrix: Water
Sampled on 06/24/98 by MAXYMILLIAN
Received on 06/25/98 by DDR
QC and Data Review by

Preservative: Refrigeration, HCl
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Federal Express

Volatile Organics

EPA Method 502.2-SW846 8021

Parameter for AB10323

	Result (in ug/L)	MDL	Analyzed	Analyst
Benzene	Not detected	0.5	07/01/98	CH
Bromobenzene	Not detected	0.5	07/01/98	CH
Bromochloromethane	Not detected	0.5	07/01/98	CH
Bromodichloromethane	Not detected	0.5	07/01/98	CH
Bromoform	Not detected	0.5	07/01/98	CH
Bromomethane	Not detected	0.5	07/01/98	CH
n-Butylbenzene	Not detected	0.5	07/01/98	CH
sec-Butylbenzene	Not detected	0.5	07/01/98	CH
tert-Butylbenzene	Not detected	0.5	07/01/98	CH
Carbon tetrachloride	Not detected	0.5	07/01/98	CH
Chlorobenzene	Not detected	0.5	07/01/98	CH
Chloroethane	Not detected	0.5	07/01/98	CH
Chloroform	Not detected	0.5	07/01/98	CH
Chloromethane	Not detected	0.5	07/01/98	CH
2-Chlorotoluene	Not detected	0.5	07/01/98	CH
4-Chlorotoluene	Not detected	0.5	07/01/98	CH
Dibromochloromethane	Not detected	0.5	07/01/98	CH
1,2-Dibromo-3-chloropropane	Not detected	0.5	07/01/98	CH
1,2-Dibromoethane	Not detected	0.5	07/01/98	CH
Dibromomethane	Not detected	0.5	07/01/98	CH
1,2-Dichlorobenzene	Not detected	0.5	07/01/98	CH
1,3-Dichlorobenzene	Not detected	0.5	07/01/98	CH
1,4-Dichlorobenzene	Not detected	0.5	07/01/98	CH
Dichlorodifluoromethane	Not detected	0.5	07/01/98	CH
1,1-Dichloroethane	Not detected	0.5	07/01/98	CH
1,2-Dichloroethane	Not detected	0.5	07/01/98	CH
1,1-Dichloroethene	Not detected	0.5	07/01/98	CH
cis-1,2-Dichloroethene	Not detected	0.5	07/01/98	CH
trans-1,2-Dichloroethene	Not detected	0.5	07/01/98	CH
1,2-Dichloropropane	Not detected	0.5	07/01/98	CH
1,3-Dichloropropane	Not detected	0.5	07/01/98	CH
2,2-Dichloropropane	Not detected	0.5	07/01/98	CH
1,1-Dichloropropene	Not detected	0.5	07/01/98	CH
cis-1,3-Dichloropropene	Not detected	0.5	07/01/98	CH

Volatile Organics
EPA Method 502.2-SW846 8021

Parameter for AB10323

trans-1,3-Dichloropropene

Ethylbenzene

Hexachlorobutadiene

Isopropylbenzene

4-Isopropyltoluene

Methylene chloride

Naphthalene

Propylbenzene

Styrene

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

Tetrachloroethene

Toluene

1,2,3-Trichlorobenzene

1,2,4-Trichlorobenzene

1,1,1-Trichloroethane

1,1,2-Trichloroethane

Trichloroethene

Trichlorofluoromethane

1,2,3-Trichloropropane

1,2,4-Trimethylbenzene

1,3,5-Trimethylbenzene

Vinyl chloride

o-Xylene

m,p-Xylenes

Methyl-t-butyl ether

Surrogate compound recovery(%):

2-Bromo-1-chloropropane

a,a,a-Trifluorotoluene

BFB Surrogate Recovery (%)

CLB-d5 Surrogate Recovery (%)

Result (in ug/L)

MDL

Analyzed
07/01/98Analyst
CH

Not detected

0.5

07/01/98

CH

Not detected

0.5

07/01/98

CH

Not detected

0.5

07/01/98

CH

Not detected

0.5

07/01/98

CH

Not detected

0.5

07/01/98

CH

Not detected

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07/01/98

CH

Not detected

1.0

07/01/98

CH

Not detected

1.0

07/01/98

CH

07/01/98

CH

07/01/98

CH

07/01/98

CH

07/01/98

CH

Spectrum Analytical, Inc. Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-82/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF, 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected,
Not Det, ND or nd

NC

MCL

VOA

BFB

p-DFB

CLB-dS

BCP

TFT

Decachlorobiphenyl

The compound was not detected at a concentration equal to or above the established method detection limit.

Not Calculated

EPA Maximum Contamination Level

Volatile Organic Analysis

4-Bromofluorobenzene

1,4-Difluorobenzene

Chlorobenzene-d5

2-Bromo-1-chloropropane

α,α,α-Trifluorotoluene

(an EPA 608/8080 Surrogate)

(An EPA 624 Surrogate)

(An EPA 624 Surrogate)

(An EPA 624 Surrogate)

(An EPA 601 Surrogate)

(An EPA 602 Surrogate)

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non-method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

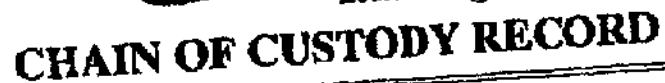
Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (%RPD) = The precision measurement obtained on duplicate/replicate analyses.

%RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2})}{\text{ave. value}} * 100\%$$



Project Name: BEECH ST. SCHOOL
Project Number: 98057
Address: BENNINGTON, VT
Date Samples Collected: 6/24/98
By: J. DAVIS

REMARKS: (special instructions, sample storage, non-standard sample bottles, etc.)

REMARKS: (Special instructions, comments, etc.)
FAX RESULTS WHEN AVAILABLE

Relinquished by: L. M. Lette Date: 6/24/98
Received by: _____ Date: _____
Relinquished by: Fred X - J Date: 6-25-9
Received by: Jan Kuzik Date: 6-25-9
Relinquished by: _____ Date: _____
Received by: _____ Date: _____

Turnaround: 24 hrs. 48 hrs. 1 week ☒ 2 weeks 4 weeks Other _____

26 South Main Street • Leominster, MA 01237 • (413) 499-9862

66 South Main Street • Lancaster, MA 01237 • (413) 499-9862

07/08/98 13:00 8413 447 7625

MAX TECH INC

012/012



State of Vermont

Hazardous Materials Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3866
FAX (802) 241-3296

PROVISIONAL EPA I.D. # REQUEST

VTP 000008391

DATE ISSUED 6 / 9 / 98

FAXED

for office use only

GENERATORS NAME: Bennington School District
(Financially Responsible)

MAILING ADDRESS: 201 Beech Street

P.O. BOX / STREET

CITY, STATE, ZIP & 4 Bennington, Vermont 05201

ACTUAL SITE LOCATION: 201 Beech Street VT Site #1260

STREET, ROUTE

CITY, STATE, ZIP & 4 Bennington, Vermont 05201

CONTACT PERSONS NAME: Mr. Gerard Prue, Maintenance Director

PHONE NUMBER (802) 447-3023

ADDRESS (PO BOX) 201 Beech Street

CITY, STATE, ZIP & 4 Bennington, Vermont 05201

SITE LEGAL OWNERS NAME: Southwest Vermont Supervisory Union

PHONE NUMBER (802) 447-3023

ADDRESS (PO BOX) 201 Beech Street

CITY, STATE, ZIP & 4 Bennington, Vermont 05201

DESCRIPTION OF WASTE: UST Leaking Heating Fuel mix w/soil & water
(Unusual circumstances, estimated 150 - 180 c.y.
spills, volume, etc.)

TRANSPORTER Maxymillian -

FACILITY Maxymillian -

REQUESTED BY: PERSON: Margaret L. Davis

COMPANY: Aaron and Sons

PHONE # (802) 447-8633 FAX # (802) 447-3571

06/09/98 08:55 14134430511

MAXYMILLIAN



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention

9806 E 98078

Tracking Number

Material Shipping Record & Log

For the shipment of contaminated soil, urban fill, and dredge materials not subject to management under section 310 CMR 40.0035 nor manifesting under 310 CMR 30.007

A Location Information

IMPORTANT:
This form is NOT to be used for the shipment of remediation wastes subject to management under section 310 CMR 40.0035 of the Massachusetts Contingency Plan nor is it to be used in lieu of a hazardous waste manifest for hazardous waste or recyclable materials subject to the Massachusetts Hazardous Waste Regulation 310 CMR 30.000.

1. Provide the following information on the location where the waste was generated:

Bennington School District
201 Beech Street
Bennington, Vermont 05201
City/Town State Zip code

2. Date/Period of generation:

6/8/98 1
From To

5. List additional tracking documents associated with this document:

VT SITE # 98-2367
Facility ID VT # 1260

3. U.S. EPA ID number:

N/A

4. 21E release:

☐ yes ☒ no

B Generator Information

1. Provide the following generator information:

Bennington School District
Gerard Prue, Maintenance Director
201 Beech Street
Bennington Vermont 05201
City/Town State Zip code
802-447-3023
Telephone number and extension

C Owner and/or Operator Information

1. If the owner and/or operator is different from the generator as indicated in Section B, provide the following information:

Check applicable: ☐ owner ☐ operator

Bennington School District/Southwest Vermont Supervisor
Mr. Gerard Prue
Same as above
Same as above
802-447-3023
City/Town State Zip code
Telephone number and extension



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D Transporter/Common Carrier Information

1. Provide the following information:

Maxymillian Technologies Inc.

Transporter/Common carrier name

Regina Simmons

Hazardous waste license number (if applicable)

Asst to V-P

Licensing state (if applicable)

Contact person

1801 East Street

Title

Street

Pittsfield

MA

01201

City/Town

413-499-3050

State

Zip code

Telephone number and extension

E Receiving Facility Information

1. Provide the following information on the receiving facility:

Maxymillian Technologies - ENCAP Facility

Receiving facility name

Regina Simmons

Asst to V-P

Contact person

1801 East St, Pittsfield

Title

MA

01201

Street

413-499-3050

State

Zip code

Telephone number and extension

2. Type of facility:

- ☒ asphalt batch/cold mix
☐ asphalt batch/hot mix
☐ other:

- ☐ landfill/disposal
☐ landfill/daily cover

- ☐ thermal processing
☐ landfill/structural fill

3. Permit number: WR-91-31

F Description of Material

Check all that apply:

1. a. ☒ soil ☐ dredge material ☐ fill

b. Description:

c. Classification:

- ☐ MIT ☐ USDA
☐ USAEC ☐ ASEE

2. ☐ Other:

describe

3. Type of contamination:

- a. ☐ gasoline ☐ diesel fuel ☒ #2 oil ☐ #4 oil
☐ #6 oil ☐ waste oil ☐ kerosene ☐ jet fuel

b. ☐ Debris:

- ☐ demolition ☐ vegetative ☐ inorganic

c. ☐ Other:

describe



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F Description of Material (cont.)

4. Constituents of concern (check all that apply):

- ☐ As ☐ Cd ☐ Cr ☐ Pb ☐ Hg ☐ Na ☐ PCBs
☐ HVOCs ☐ PATH ☐ VOCs ☐ PAHs ☐ BNAs
☒ TPH ☐ Other:

describe

7. Estimated volume of materials:

150 - 180

Cubic Yards

Tons

Other

5. Analyses performed (check all that apply):

- ☐ As ☐ Cd ☐ Cr ☐ Pb ☐ Hg ☐ Na ☐ PCBs
☐ HVOCs ☐ PATH ☐ VOCs ☐ PAHs ☐ BNAs
☒ TPH ☐ TCLP (inorganic) ☐ TCLP (organic)
☐ Other:

describe

8. Contaminant source (check one/specify):

- ☐ transportation accident ☒ just ☐ other:

describe

6. Screening performed:

Type

Instrument Used

Comments

9. Indicate which waste characterization support documentation is attached:

- ☐ site history information
☐ sampling and analytical methods/procedure
☒ laboratory data, ☐ field screening data

If supporting documentation is not appended, provide an attachment stating the date and in connection with what document such information was previously submitted to the facility.

G Qualified Environmental Professional Opinion

Maxymillian Technologies Inc.

Name of organization

Robert F. MacLean L.S.P.

Name of professional

413-499-8050

Title

Telephone number and extension

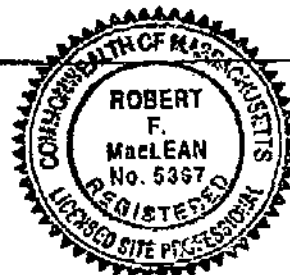
"I have personally examined and am familiar with the information contained on and submitted with this form. Based on this information, it is my opinion that the testing and assessment actions undertaken were adequate to characterize the waste, and that the facility or location can accept wastes with the characteristics described in this submittal. I am aware that significant penalties including, but not limited to, possible fines and imprisonment may result if I willfully submit information which I know to be false, inaccurate, or materially incomplete."

Signature

Date

License number

Seal:





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Certification of Generator

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information contained herein is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for submitting false, inaccurate, or incomplete information.

Signature

Margaret L. Davis

June 9, 1998

Date

Margaret L. Davis

Name (Print)

Acknowledgment of Receipt by Receiving Facility

Maxymillion Technologies Excav. Facility

Receiving Facility

REGINA SIMMONS

Representative (Print)

Asst. to V-P

Title

Regina Simmons

Date

6/12/98



Bureau of Waste Prevention

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J Load Information

Note:
Make additional
copies of this
page as neces-
sary.

LOAD #: L

GARY BAURY

Signature of transporter

R. J. J. J. J.

Receiving facility

6/12/98

Date received

8:50 AM

Time received

6-12-98

Date of shipment

1:45 AM

Time of shipment

26046 MA

Truck/Tractor registration

W4129 MA

Trailer registration

27.07

Load size (cubic yards/tons)

LOAD #: 3

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

LOAD #: 2

GARY BAURY

Signature of transporter

R. J. J. J. J.

Receiving facility

6/12/98

Date received

12:30 PM

Time received

6-12-98

Date of shipment

11:00 AM

Time of shipment

26046 MA

Truck/Tractor registration

W4129 MA

Trailer registration

22.18

Load size (cubic yards/tons)

LOAD #: 4

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

K Log Sheet Volume Information

Total volume this page (cubic yards/tons)

49.25

Total carried forward (cubic yards/tons)

Total carried forward and this page (cubic yards/tons)

49.25

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Bureau of Waste Prevention

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J Load Information

Note:
Make additional
copies of this
page as neces-
sary.

LOAD #: 1

Robert C. Morrison - PS:GAT

Signature of transporter

MAXYMILLIAN TECHNOLOGIES

Receiving facility

6-12-98

Date received

Time received

6-12-98

Date of shipment

8:35 AM

Time of shipment

212-291 MASS

Truck/Tractor registration

33676

Trailer registration

24.16

Load size (cubic yards/tons)

LOAD #: 3

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

LOAD #: 2

Robert C. Morrison - PS:GAT

Signature of transporter

MAXYMILLIAN TECHNOLOGIES

Receiving facility

6-12-98

Date received

Time received

6-12-98

Date of shipment

12:35 PM

Time of shipment

212-291 MASS

Truck/Tractor registration

33676 MASS

Trailer registration

27.55

Load size (cubic yards/tons)

LOAD #: 4

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

K Log Sheet Volume Information

Total volume this page (cubic yards/tons) 51.71

49.25

Total carried forward (cubic yards/tons)

100.96

Total carried forward and this page (cubic yards/tons)

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Bureau of Waste Prevention

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J Load Information

Note:
Make additional
copies of this
page as neces-
sary.

LOAD #: 1

Wendy Young, CT2 #2

Signature of transporter

Receiving facility

Date received

8:10 AM

Time received

6-12-98

Date of shipment

Time of shipment

26047 MA

Truck/Tractor registration

49151 MA

Trailer registration

Load size (cubic yards/tons)

26.51

LOAD #: 3

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

LOAD #: 2

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

LOAD #: 4

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

K Log Sheet Volume Information

Total volume this page (cubic yards/tons)

26.51

Total carried forward (cubic yards/tons)

100.96

Total carried forward and this page (cubic yards/tons)

127.47

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Bureau of Waste Prevention

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9806 E 980 78

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J Load Information

LOAD #: 1

John Jones Ctl #10

Signature of transporter

Receiving facility

Date received

6-12-98

Time received

6-12-98

Date of shipment

7:20

Time of shipment

32968 MA

Truck/Tractor registration

44199 MA

Trailer registration

25.12

Load size (cubic yards/tons)

LOAD #: 3

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

LOAD #: 2

John Jones Ctl #10

Signature of transporter

Receiving facility

Date received

6-12-98

Time received

6-12-98

Date of shipment

11:00

Time of shipment

32968 MA

Truck/Tractor registration

44199 MA

Trailer registration

24.91

Load size (cubic yards/tons)

LOAD #: 4

Signature of transporter

Receiving facility

Date received

Time received

Date of shipment

Time of shipment

Truck/Tractor registration

Trailer registration

Load size (cubic yards/tons)

Note:
Make additional
copies of this
page as neces-
sary.

K Log Sheet Volume Information

Total volume this page (cubic yards/tons) 50.03

Total carried forward (cubic yards/tons) 127.47

Total carried forward and this page (cubic yards/tons) 177.50

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